

REMARKS

By this amendment, claims 1-11 and 14-15 are pending.

The Office Action mailed December 15, 2004 rejected claims 1-8, 11, and 14-15 as obvious under 35 U.S.C. § 103 based on *Zollinger et al.* (US 5,999,947) and claims 9-10 as obvious under 35 U.S.C. § 103 based on *Zollinger et al.* in view of *Suver* (US 6,016,497). The rejection of claims 1-11 and 14-15 is respectfully traversed because *Zollinger et al.* and *Suver* do not teach or otherwise suggest the features of claims 1-11 and 14-15.

Independent claim 1 recites, “the first copy of the table and the second copy of the table **resulting from said transmitting and updating** have at least one non-overlapping relational database column” and independent claim 11 recites, “the first copy of the data container and the second copy of the data container **resulting from said transmitting and updating** have at least one non-overlapping data field.”

In stark contrast, *Zollinger et al.* (per Abstract) is directed to a system that allows changes made to an original database table found on a server computer to be reflected in client copies of the database table based on intermittent client requests for synchronization. Instructions are transmitted to the client so that the client may operate a database engine to apply the instructions for making the client copy of the database table current with the original managed on the server.

The Office Action correctly acknowledges that *Zollinger et al.* does **not** explicitly disclose “non-overlapping column” (p. 4) or “non-overlapping data field” (p. 7) but contends (p. 3, similarly on pp. 7-8):

Zollinger on col. 6, lines 19-25 and col. 10, line 40 - col. 11, line 32: teaches an entire column can be added to a database table changing the structure of the database table.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have incorporated adding an entire column to a database table which will change the structure of the database table of Zollinger

replacing non-overlapping column in a table in order to efficiently handle the updating process of small database table.

However, *Zollinger et al.*, at col. 11: 32, states:

The differences in the table state from a state shown in FIG. 2C to that shown in FIG. 2D is a major structural change to the table. Namely, an entire column for the title of the employee is added. Depending on the capabilities of the system, such a structural change may not be represented in a generic format in an efficient manner. In other words, it could be more efficient to simply copy the table down to the client rather than send instructions for updating the table. Those skilled in the art will realize that various situations and parameters will effect this threshold determination and a system may be tuned or optimized to recognize this. **For example, adding a column to a relatively small database table may be efficiently handled by simply copying the table down to the client while the same structural change to a large database table is more efficiently handled by storing an update.** For the example shown illustrating the addition of the title column as shown in the table state change between FIG. 2C and FIG. 2D, a major revision is assumed for illustration purposes.

Thus, no matter how the client copy of the database table resulting from transmitting and updating of *Zollinger et al.* is implemented, whether “by simply copying the table down” or “by storing an update,” the resulting table after transmitting and updating has the same columns—not “at least one non-overlapping relational database column” or “at least one non-overlapping data field” as recited in independent claims 1 and 11.

Regarding the rejection of claim 9, the Office Action (p. 10) correctly acknowledges that *Zollinger et al.* does **not** explicitly disclose “dropping the first column,” and applies *Suver* as teaching “synchronization between multiple tables” at col. 19:15-17; “updating the database schema” at col. 21:6-9; and “dropping a column” at col. 21:61-64.

However, *Suver* (per Abstract) is directed to methods for accessing and storing information embedded in a column of a database row, especially useful for complex data, that is, data which is logically multi-valued or hierarchical. Embedded data is not stored in a separate table but is stored directly in a complex column comprising embedded data as subtables. A row of data is physically stored in a tagged, variable-length object-relational format, which allows the

data to be stored as atomic data values or embedded as collections of data values, data structures, or collections of data structures. The structures can have further levels of embedding, i.e. more collections and/or structures. Embedded data may further include typed data embedded in multiple tables and columns. The query language for accessing the data includes a series of extensions that provide additional access paths to the data. Searches can access data within tables and sub-tables, and can access data by user defined type (UDT) in a single table or across multiple tables. *Suver* is not concerned with tables that are “replicated at a plurality of sites” as in claim 9, and thus is not concerned with the complexity of “dropping a column” in such an environment.

Zollinger et al. states (col. 6: 18-25, emphasis added):

As used herein, a “database change event” is anything that changes the state of a database, such as **additions, deletions, or modification of records**. Furthermore, other types of events may make changes to a database including, by way of example and not limitation, sorting a database, **adding** an extra field or column to a database table, changing “metadata” parameters such as passwords, permissions, logins, structure, etc.

This cited portion of *Zollinger et al.* merely refers to a “database change event” as including additions, deletions, or modifications of records, which are different from columns in a database environment, and of other types of events including adding an extra field or column to a database table. There is no disclosure or suggestion of “dropping the first column” as positively recited by claim 9, and the addition of *Suver* does not cure this deficiency in the claimed environment. Thus the Examiner has not met his initial burden of establishing a *prima facie* basis to deny patentability to the claimed invention. *In re Mayne*, 41 USPQ2d 1451 (Fed. Cir. 1997); *In re Deuel*, 34 USPQ2d 1210 (Fed. Cir. 1995); *In re Bell*, 26 USPQ2d 1529 (Fed. Cir. 1993); *In re Oetiker*, 24 USPQ2d 1443 (Fed. Cir. 1992).

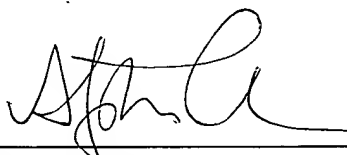
In view of the above reasoning, Applicants respectfully request the indication that independent claims 1, 9, and 11 are allowable. Also, claims 2-8, 10 and 14-15, depending correspondingly from these independent claims, are also allowable for at least the reasons proffered for the allowability of the independent claims. Additionally, these dependent claims are separately patentable on their own merits.

Therefore, the present application, as amended, overcomes the objections and rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at 703-425-8516 so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

DITTHAVONG & CARLSON, P.C.

4/14/2005
Date


Margo Livesay, Ph.D.
Reg. No. 41,946

Stephen C. Carlson
Reg. No. 39,929

Attorneys for Applicant(s)

10507 Braddock Rd
Suite A
Fairfax, VA 22032
Tel. 703-425-8516
Fax. 703-425-8518